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Mazdoor Kisan Shakti Sangathan

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IS 11218 (1984): Marine Valve Hand Wheels [TED 17:  
Shipbuilding]

“ज्ञान से एक नये भारत का निर्माण”

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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”





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Indian Standard

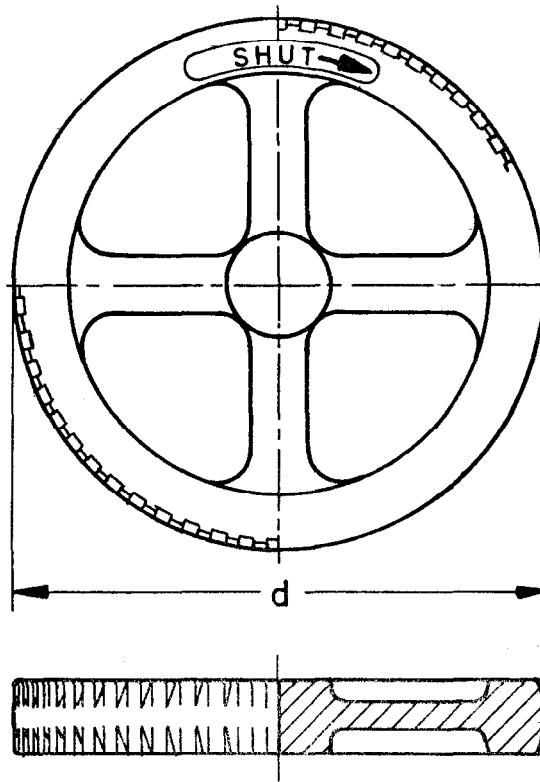
## SPECIFICATION FOR MARINE VALVE HAND WHEELS

**1. Scope** — Specifies material and general requirements for hand wheels of 50 to 900 mm diameter for use on all valves intended for marine duty.

**1.1** This standard does not specify detailed dimensions other than rim diameter.

### 2. Types and Dimensions

**2.1** Hand wheels manufactured in accordance with this standard shall be of solid construction, having a flat, circular rim connected to a central boss by either four or six spokes, in the manner indicated in Fig. 1. The rim shall be of fluted pattern on its outer edge.



**Note** — The central boss details, for fixing the handwheel to the valve-stem, will be made to individual requirements as specified in 4.2.

FIG. 1 MARINE PATTERN VALVE HANDWHEEL

**2.2** The diameter of the outer edge of the hand wheel shall be chosen from those listed in Table 1.

TABLE 1 HANDWHEEL RIM DIAMETERS

All dimensions in millimetres.

50*	63*	80*	90	100*
125*	160*	180	200*	250*
315*	355	400*	450	500*
560	630*	710	800*	900

**Note** — The sizes given here are in accordance with the R20 series from IS : 1076-1969 'Preferred numbers (first revision)'. Those marked with an asterisk are to be regarded as the preferred sizes.

**3. Material** — The hand wheels shall be made of grey cast iron complying with the requirements of IS:210-1978 'Grey iron castings (*third revision*)' Grade FG 200 as a minimum. Other materials may be used provided that they are at least as suitable in all respects and are equally acceptable to the purchaser.

#### 4. Construction and Scantlings

**4.1** The number of spokes, that is four or six, and the scantlings of the handwheel (other than the diameter specified in 2.2) shall be chosen by the manufacturer in accordance with the information supplied by the purchaser.

**4.2** The handwheel shall be constructed with a solid central boss, unless otherwise specified by the purchaser. Where a cored or machined central hole is incorporated the details shall be supplied by the purchaser (see 7). In the case of handwheels required for valves having a rising stem with yoke sleeve, the minimum diameter of the boss shall be specified by the purchaser.

**4.3** Where specific requirements of locking arrangement of valve is required, provision for the same shall be made on the handwheel.

#### 5. Direction of Rotation

**5.1** The handwheel shall be embossed with an arrow indicating the direction of closing and either of the words 'CLOSE' or 'SHUT' adjacent to the arrow.

**5.2** In accordance with the requirements of related Indian Standards for valves, the handwheel marking shall indicate a clockwise direction of rotation for closing the valve to which it is fitted.

#### 6. Workmanship

**6.1** The manufacturer shall ensure by visual inspection that:

- a) each handwheel is circular, flat and free from distortion;
- b) the central boss is concentric with the rim;
- c) the casting is homogeneous and free from detrimental flaws, and
- d) each handwheel is free from any sharp edges or rough surfaces likely to cause injury to the hands.

**6.2** Handwheels made of cast iron, or any alternative material subject to corrosion in a marine environment, shall be finished with a suitable rust preventing paint or other corrosion-resistant coating.

**7. Information to be Supplied with an Enquiry or Order** — The following information shall be supplied by the purchaser placing an enquiry or order for handwheels to this standard:

- a) The intended service and rating of the valve, where known, for which the handwheel is intended.
- b) The size of handwheel required (see 2.2).
- c) The number of handwheels required.
- d) Central boss details (see 4.2).

#### E X P L A N A T O R Y N O T E

This standard is supplementary to other Indian Standards for various types of valves for use in marine pipe work systems. In the preparation of this standard, assistance has been derived from BSMA 4-1970 Valve handwheels : marine pattern, issued by the British Standards Institution (BSI).